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DRAFT Southern California Association of Governments Catalog of Transportation Infrastructure Investment (TII) GHG Reduction Policy Options

A catalog of state-level, greenhouse gas (GHG)–reducing actions and policy options based on actions undertaken or considered in state-wide climate change action plans by multi-stakeholder groups in a wide cross-section of U.S. states and by state, local, and private participants.

Key to Nominal Rankings of Options in the Tables That Follow:

Potential GHG Emission Reductions [1]	Potential Cost or Cost Savings [1, 2]
High (H): At least 1.0 million metric tons (MMt) carbon dioxide equivalent (CO_2e) per year by 2030	**High (H)**: $100 per metric ton CO_2e (tCO_2e) or above
Medium (M): From 0.1 to 1.0 $MMtCO_2e$ per year by 2030	**Medium (M):** $0 to $100/$tCO_2e$
Low (L): Less than 0.1 $MMtCO_2e$ per year by 2030	**Low (L):** Less than $0/$tCO_2e$
Uncertain (U): Insufficient information to estimate at this time	**Uncertain (U):** Insufficient information to estimate at this time

[1] Several measures may overlap in terms of emissions reductions and/or cost impacts. “Stand-Alone” estimates provide values for measures that would be implemented independently of other measures, before accounting for potential overlap or synergies
[2] Costs are denoted by a positive number. Cost savings (i.e., “negative costs”) are denoted by a negative number.

Definition of "Priorities for Analysis":

- **High:** High-priority options will be analyzed first.
- **Medium:** Medium-priority options will be analyzed next, time and resources permitting.
- **Low**: Low-priority options will be analyzed last, time and resources permitting.

Important Note: The state actions are numbered in this catalog solely for convenience in referencing them. Their numbers do NOT reflect a ranking or prioritization of the actions.

Transportation Infrastructure and Investments

Note that this listing will be developed more fully during the Transportation Infrastructure Investments (TII) Technical Work Group (TWG) process. TWG members are encouraged to provide input on policies and programs currently in place to assist in defining baseline conditions. The "Notes" column may be used to record recently enacted policies and programs.

Option No.	GHG Reduction Policy Option	Potential GHG Emission Reduction	Cost per Ton	Externalities, Feasibilities Considerations	Priority for Analysis	Notes / Related Actions
TII-1. BIKE AND PEDESTRIAN INFRASTRUCTURE						
1.1	Bike and Pedestrian Infrastructure					
1.2	Statewide Walkable and Bike Policy					
1.3	Road-trail Connectivity					
1.4	Promote Pedestrian Traffic					
1.5	Sidewalk Construction					
1.6	Trail Improvement Project					
1.7	City Bicycle Plan Amendments					
1.8	Bicycle Priority Zone					
1.9	Increase Number of Bike Racks					
1.10	Construct Bike Lanes					
1.11	Construct Regional Bikeways					

Option No.	GHG Reduction Policy Option	Potential GHG Emission Reduction	Cost per Ton	Externalities, Feasibilities Considerations	Priority for Analysis	Notes / Related Actions
1.12	Connect Transit and Biking Systems					
1.13	Upgrade Bike Transportation System					
1.14	Create Signature Bike Projects/Programs					
1.15	Facilitate increased Biking Opportunities					
1.16	Traffic Calming Measures					
1.17	Adopt and Implement Complete Streets Policy					
TII-2. FREIGHT INFRASTRUCTURE						
2.1	Intermodal Freight Initiatives					
2.2	Feeder Barge Container Services					
2.3	Increase Rail Capacity and Address Rail Freight System Bottlenecks					
2.4	Shift Freight Movements From Truck to Rail					
2.5	Designated Truck Lanes					
2.6	Highway-Rail Grade Separations					
TII-3. PARKING INFRASTRUCTURE						
3.1	Park-and-Ride Lots					

Option No.	GHG Reduction Policy Option	Potential GHG Emission Reduction	Cost per Ton	Externalities, Feasibilities Considerations	Priority for Analysis	Notes / Related Actions
3.2	Improve Parking Regulations					
TII-4. ROAD INFRASTRUCTURE						
4.1	Transit Priority (Signal Priority, HOV Lanes)					
4.2	High-Occupancy Vehicle Lanes					
4.3	Van Pooling and Car Pooling Incentives					
4.4	Traffic Calming					
4.5	Energy Efficient Lighting along Transportation Corridors					
4.6	Pavement Management					
4.7	Feeder and Distributor Systems – Orbital Routes					
4.8	Smart Streets					
4.9	Electrical Charging Stations					
4.10	Major CO_2/VMT Reduction Strategies					
4.11	Electric Vehicles					
4.12	Implement Automated Speed Enforcement					
4.13	Install Ramp Meters					

Option No.	GHG Reduction Policy Option	Potential GHG Emission Reduction	Cost per Ton	Externalities, Feasibilities Considerations	Priority for Analysis	Notes / Related Actions
4.14	Mixed-Flow Lanes					
4.15	Expand HOT Lanes and Toll Road Systems					
4.16	Arterial Improvements					
4.17	High Speed Regional Transport System					
4.18	Expand the Intelligent Traffic Corridor Program		H			
TII-5. PUBLIC TRANSIT INFRASTRUCTURE						
5.1	Transit Marketing, Promotion, and Pricing Incentives					
5.2	Expand Transit Infrastructure (Rail, Bus, Bus Rapid Transit)					
5.3	Commuter Transit					
5.4	Intercity Bus Transit					
5.5	Bus Rapid Transit					
5.6	Light Rail Transit					
5.7	Create Regional Multimodal Transportation Centers					
5.8	Targeted Infrastructure Growth					
5.9	Bus Fleet Measures					
5.10	Replacement of Bus Fleets					

Option No.	GHG Reduction Policy Option	Potential GHG Emission Reduction	Cost per Ton	Externalities, Feasibilities Considerations	Priority for Analysis	Notes / Related Actions
5.11	Statewide Policies on Replacement of Transit Equipment					
5.12	Station Cars					
5.13	Feeder-Distributor Services					
5.14	Converting Car Beaches to Mixed Use Development					
5.15	Reactivation and Use of Unused or Lightly Used Rail ROW					
5.16	Support Extension of Rail Line					
5.17	Village Trolley – Trial Basis					
5.18	Enhance Bus Stops					
5.19	Public Transport – Hours of Service					
5.20	Public Transport – Route Structure					
5.21	Public Transport – Coordination of Routes					
5.22	Improve Transit Service (Frequency, Convenience, and Quality)					
5.23	Transit Oriented Infrastructure Development in Infill Corridors					

Acronyms

ASTM = American Society of Testing Materials
ATVs = all-terrain vehicles
B2 = fuel mixture of 2% biodiesel and 98% gasoline
BRT = Bus Rail Transit
CCI = Cross-Cutting Issues
CO_2 = carbon dioxide
CMAQ = Congestion Management and Air Quality
DOT = U.S. Department of Transportation
E10 = fuel mixture of 10% ethanol and 90% gasoline
EPA = U.S. Environmental Protection Agency
GHG = greenhouse gas
HOT = high-occupancy toll
HOV = high-occupancy vehicle
LCF = low-carbon fuel
LRT = light rail transit
LEED = Leadership in Energy and Environmental Design
MPG = miles per gallon
MPO = metropolitan planning organization
R&D = research and development
RFS = renewable fuel standard
ROW = right of way
SLR = sea level rise
TIF = tax increment financing
TDRs = transferable development rights
TRU = truck refrigeration unit
TWG = Technical Work Group
VMT = vehicle miles traveled